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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,064	07/16/2003	Kiyoshi Hirota	MAT-8446US	8839

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EXAMINER	
THOMAS, ERIC W	
ART UNIT	**PAPER NUMBER**
2831	

DATE MAILED: 11/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/621,064	HIROTA ET AL.	
	Examiner	Art Unit	
	Eric W Thomas	2831	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 October 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

INTRODUCTION

The examiner acknowledges, as recommended in the MPEP, the applicant's submission of the amendment dated 10/4/04. At this point, claims 1-11 have been amended; and claim 12 has been added. Thus claims 1-12 are pending in the instant application.

DETAILED ACTION

Claim Objections

1. Claims 1-12 are objected to because of the following informalities:

Regarding claims 1-7, 9 line 1, change the preamble from "an anode body for solid electrolytic capacitor" to –an anode body for a solid electrolytic capacitor--. Appropriate correction is required.

Claim 4, lines 6-7, the limitation, "a flat plane area of said valve metal foil covered with said sintered layer is not less than one half of the flat plane area" is confusing (offers no structural limitation). The flat plane area is inherently the same as the flat plane area. This limitation should be deleted from the claim.

Claim 5, line 7, insert –the—before "layer".

Claim 6, line 8, insert –the—before "sintered".

Claim 7, lines 7-8, the limitation, "a layer of sintered body formed of valve metal provided on the upper and lower surfaces of the porous valve metal body" is confusing. Is this a new sintered body? The examiner interpreted this as –the sintered body provided on the upper and lower surfaces of the porous valve metal body--.

Claim 9, line 6, insert –the—before "anode".

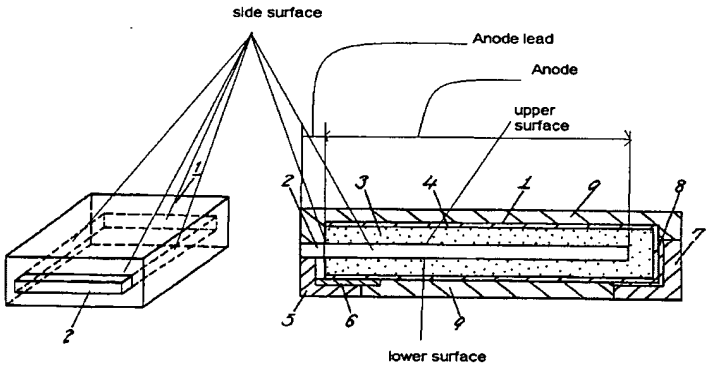
Claim 9, line 6, delete "an" and replace with –the--.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5, 7, 9-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Masuda et al. (US 6,400,556).

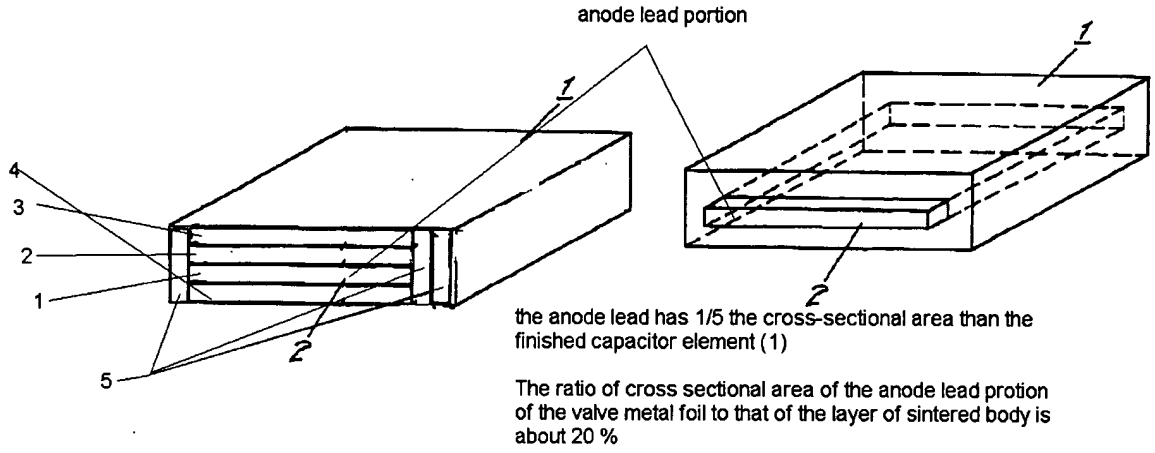


Masuda et al. disclose in fig. 1-2, an anode body for a solid electrolytic capacitor, the anode body having a top, bottom, and sides, the anode body comprising: a valve metal foil (2 – col. 2 lines 20-25) which makes an anode, and a layer of sintered body (3) formed of the valve metal provided on the upper and lower surfaces of the valve metal foil, an anode lead (see above) extending from the anode on one of the sides, the anode extending to all other of the sides and covered with an insulating layer (col. 3 lines 25-30) on the all other of the sides.

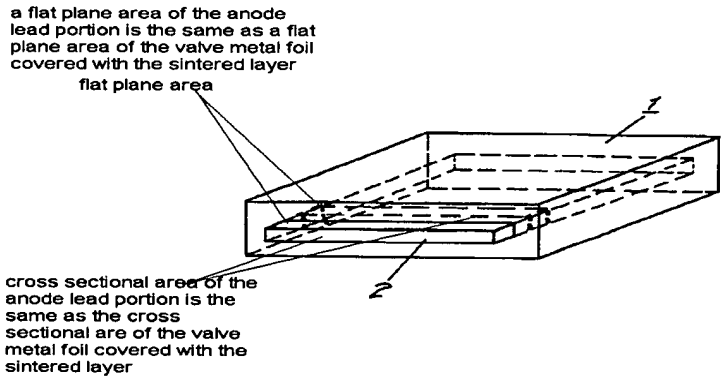
Regarding claim 2, Masuda et al. disclose in fig. 1-2, an anode body for a solid electrolytic capacitor comprising a valve metal foil (2 – col. 2 lines 20-25), and a layer of sintered body formed of the valve metal provided on the upper and lower surfaces of the valve metal foil, an anode lead (see above) extending from the anode on one of the sides, the anode extending to all other of the sides and covered with an insulating layer (col. 3 lines 25-30) on the all other of the sides.

Regarding claim 3, Masuda et al. disclose in fig. 1-2, an anode body for a solid electrolytic capacitor comprising a valve metal foil which makes an anode (2 – see fig. above -- col. 2 lines 20-25), and a layer of sintered body (3) formed of the valve metal provided on the upper and lower surfaces of the valve metal foil, an anode lead extending from the anode on one of the sides, the anode extending to all other of the sides and covered with an insulating layer (col. 3 lines 25-30) on the all other sides (see fig. above).

Regarding claim 4, Masuda et al. disclose an anode body for a solid electrolytic capacitor comprising a valve metal foil which makes an anode, and a layer of sintered body formed of the valve metal provided on the upper and lower surfaces of the valve metal foil, wherein a flat plane area of the valve metal foil covered with the sintered layer is the same as the flat plane area.



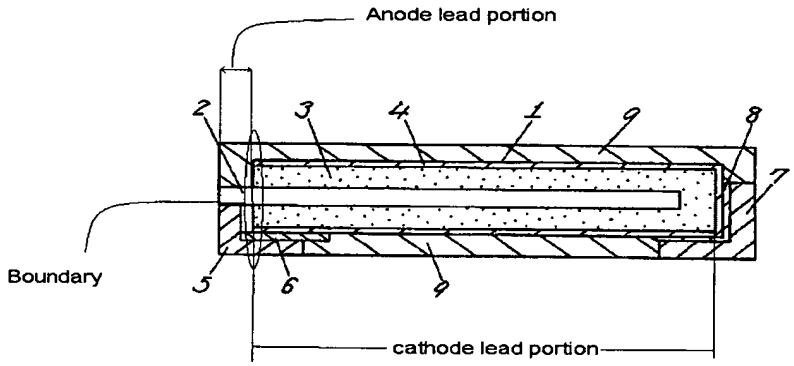
Regarding claim 5, Masuda et al. disclose an anode body for a solid electrolytic capacitor comprising a valve metal foil which makes an anode, and a layer of sintered body formed of the valve metal covering the valve metal foil with exception of an anode lead portion, wherein a ratio of cross sectional area of the anode lead portion of the valve metal foil to that of the layer of sintered body is about 20 % (see illustration above).



Regarding claim 6, Masuda et al. disclose an anode body for a solid electrolytic capacitor comprising a valve metal foil with makes an anode, and an layer of sintered body formed of valve metal covering the valve metal foil with exception of the anode

lead portion, wherein a flat plane area, and a cross sectional area of the anode lead portion of the valve metal foil have at least the same square measure as the corresponding areas valve metal foil covered with the sintered layer.

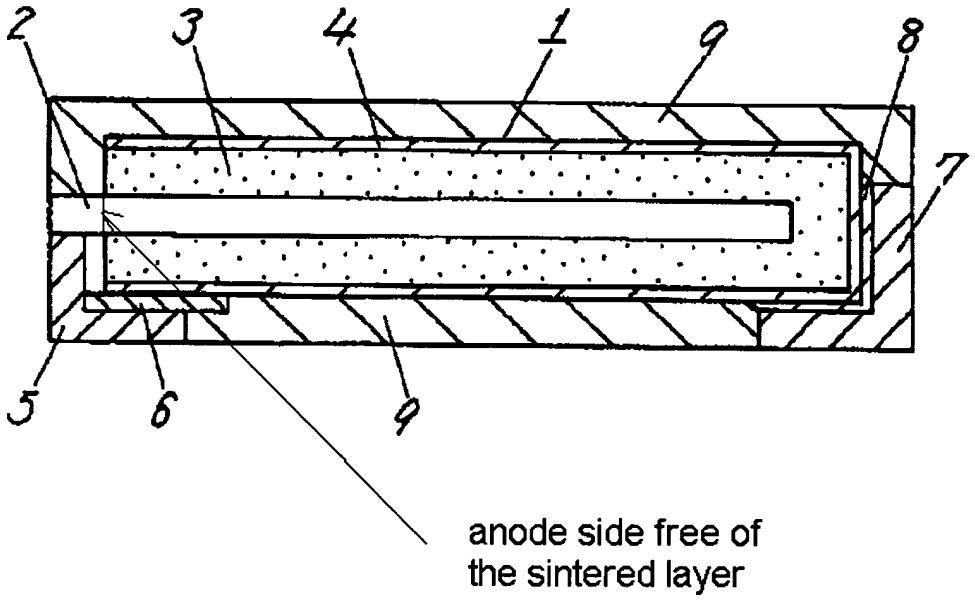
Regarding claim 7, Masuda et al. disclose an anode body for a solid electrolytic capacitor, the anode body having a top, a bottom and sides the anode body comprising a porous valve metal which makes an anode (col. 3 lines 5-25), and an anode lead (see above fig) extending from the anode on one of the sides, the anode extending to all other of the sides and covered with a sintered layer on the all other of the sides; and the sintered layer formed on the upper and lower surfaces of the porous valve metal.



Regarding claim 9, Masuda et al. disclose in fig. 9, an anode body for a solid electrolytic capacitor the anode body having a top, a bottom and sides, the anode body comprising an anode lead portion (see above) extending from the anode on one of the sides, the anode extending to all other of the sides and covered with a sintered layer (3) on all other of said sides; and a porous valve metal (2) which makes the anode, which has been separated into an anode lead portion (see above) and cathode portion (see above) with a boundary (see above) in between.

Regarding claim 10, Masuda et al. disclose in fig. 1, & 2, the anode body for the solid electrolyte capacitor, which the anode body having a dielectric film (col. 3 lines 26-28), a solid electrolyte layer (col. 3 lines 26-28), and a cathode layer (4) laminated in the order on the outer surface with exception of the anode lead portion, the anode body included in the solid electrolytic capacitor.

Regarding claim 11, Masuda et al. disclose in fig. 1, & 2, the anode body for the solid electrolyte capacitor, which the anode body having a dielectric film (col. 3 lines 26-28), a solid electrolyte layer (col. 3 lines 26-28), and a cathode layer (4) laminated in the order on the outer surface with exception of the anode lead portion, the anode body included in the solid electrolytic capacitor.



Regarding claim 12, Masuda et al. disclose the one of said sides free of the sintered layer (see fig. above).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Masuda et al. (US 6,400,556) in view of Uchi et al. (US 6,038,124).

Masuda et al. disclose the claimed invention except for the porous valve metal is either one among a foam metal and a sponge metal.

Uchi et al. teach the use of a sponge metal foil.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the foil of Masuda et al. using a sponge material as taught by Uchi et al., since such a modification would provide a foil having high mechanical strength, and increased capacitance.

Response to Arguments

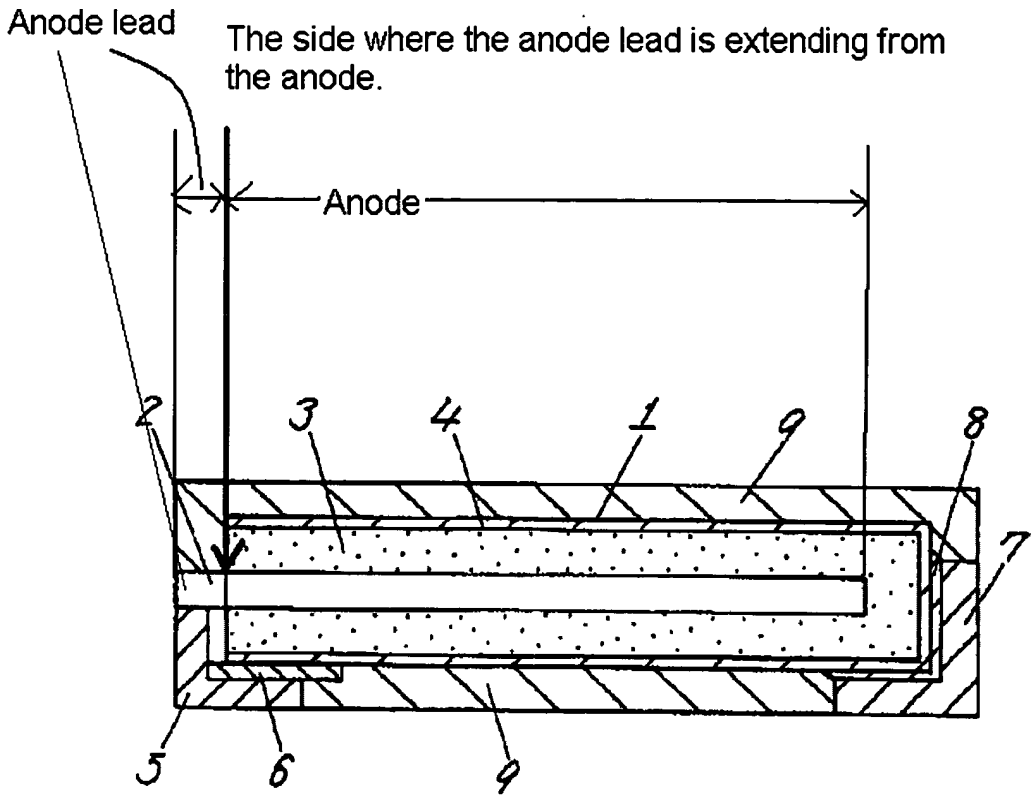
5. Applicant's arguments with respect to claim 9 have been considered but are moot in view of the new ground(s) of rejection.

6. Applicant's arguments filed 10/4/04 have been fully considered but they are not persuasive.

I) The argument, "an anode lead sandwiched between an upper portion and a lower portion of the anode body. A portion of the anode lead extends beyond the anode body. The anode lead also extends to the three other side surfaces of the anode body. The edges of the anode are covered with resist on the sides of the anode body. There is no resist on the top and bottom surfaces of the top and bottom surfaces of the anode body.

Thus, Applicants' claim 1 includes the feature of: ... an anode lead extending from the anode on one of said sides, said anode extending to all other of said sides and covered with a sintered layer on said all other of said sides.

The above features are completely lacking from Masuda which neither discloses nor suggests this anode extending to the sides of the body. Furthermore, the feature of a sintered layer on those sides in neither disclosed nor suggested Accordingly, claim 1 is patentable over Masuda" is not persuasive.



a) Masuda et al. disclose (see fig. above) an anode body for a solid electrolytic capacitor, the anode body having a top, bottom, and sides, the anode body comprising: a valve metal foil (2 – col. 2 lines 20-25) which makes an anode, and a layer of sintered body (3) formed of the valve metal provided on the upper and lower surfaces of the valve metal foil, an anode lead (see above) extending from the anode on one of the sides, the anode extending to all other of the sides and covered with an insulating layer (col. 3 lines 25-30) on the all other of the sides.

II) The argument, "Regarding claim 4, this claim recites the feature of:

...a flat plain area of said valve metal foil covered with said sintered layer is not less than one-half of the flat plain area.

The official action indicates that this feature is illustrated in Fig. 1, and Fig. 2 of Masuda. This is respectfully traversed. Applicant's representative has reviewed Fig. 1 and Fig. 2 of Masuda. Neither figure illustrates half or more of the flat plain area covered with the sintered layer" is not persuasive.

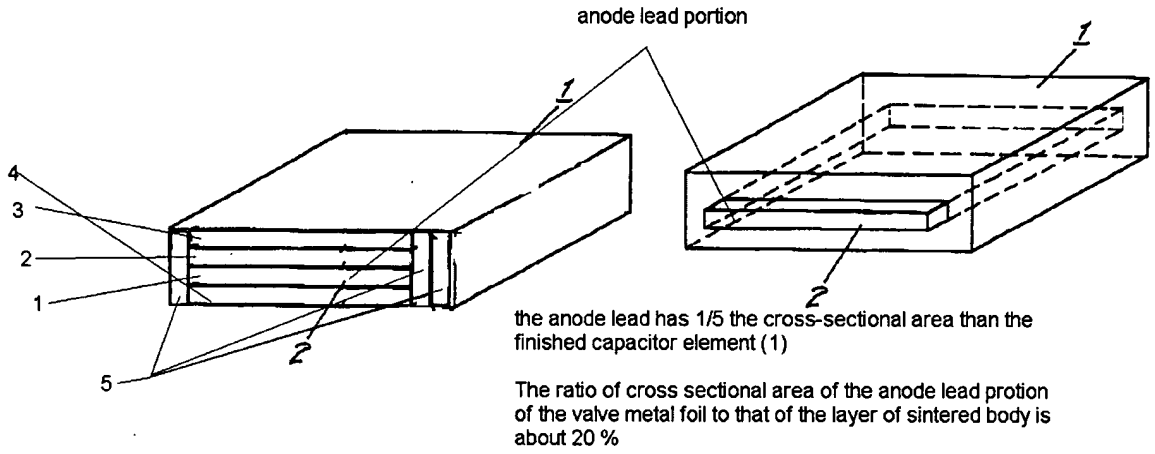
a) The limitation "a flat plane area of the valve metal foil covered with said sintered layer is not less than one half of the flat plane area" is confusing. Figure 1 illustrates the flat plane area of the valve metal foil covered with the sintered layer is the same as the flat plane area (of the valve metal foil covered with the sintered layer).

b) As noted in the claim objections, applicant is requested to delete this limitation from the claim because it does not offer any additional structural limitation.

III) The argument "Regarding claim 5, the claim recites the feature of: a ratio of cross sectional area of the anode lead portion of said valve metal foil to that of said layer of sintered body is not less than 10%.

The official action alleges that this feature is shown in Fig. 1 and Fig. 2 of Masuda. Again applicants' representative has reviewed those figures and does not see the above-claimed features in those figures" is not persuasive.

a)



Regarding claim 5, Masuda et al. disclose an anode body for a solid electrolytic capacitor comprising a valve metal foil which makes an anode, and a layer of sintered body formed of the valve metal covering the valve metal foil with exception of an anode lead portion, wherein a ratio of cross sectional area of the anode lead portion of the valve metal foil to that of the layer of sintered body is about 20 % (see illustration above). The figure above illustrates the cross-sectional area of the capacitor element (which includes the cathode, dielectric, sintered layer and anode layer) having the lines representing 5 cross-sectional areas of the anode lead portion. Therefore, as illustrated, the ratio of cross sectional area of the anode lead portion of the valve metal foil to that of the layer of sintered body is about 20 %.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric W Thomas whose telephone number is 571-272-1985. The examiner can normally be reached on M,Tu,Sat 9 am - 9:30 pm; W, Th, F 6 pm -10:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 571-272-1984. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

11/8/04

Eric W Thomas
Examiner
Art Unit 2831

ewt